

CLAIMS

2 What is claimed is:

- 1 1. A method of surveying a track, comprising the steps of:
- 2 a) positioning a first and a second measuring vehicle at end points, respectively,
3 of a track section to be measured during a measuring cycle, the first
4 measuring vehicle being designed for mobility independently of the second
5 measuring vehicle which is stationary during the measuring operation;
- 6 b) determining, at the start of each measuring cycle, position coordinates of the
7 stationary, second measuring vehicle, with the aid of a GPS receiver
8 mounted thereon, relative to a fixedly installed GPS reference station located
9 adjacent the track section to be measured, the coordinates of the GPS
10 reference station being known within a terrestrial coordinate system;
- 11 c) setting up a reference line in the form of an optical measuring beam between
12 an emitter mounted on the second measuring vehicle and a receiving unit
13 mounted on the first measuring vehicle;
- 14 d) aligning the reference line with the first measuring vehicle on the basis of the
15 determined position data;
- 16 e) advancing the mobile, first measuring vehicle in the direction towards the
17 stationary, second measuring vehicle to carry out the track surveying
18 operation; and
- 19 f) registering as a ~~correction~~ measurement value any change in position of the
20 receiving unit mounted on the first measuring vehicle relative to the reference
21 line.

- 1 2. A method of surveying a track, comprising the steps of:
- 2 - positioning a first measuring vehicle at a first end point of a track section to
3 be measured during a measuring cycle;
- 4 - positioning a second measuring vehicle at a second end point of the track
5 section, with the second end point having a known position with respect to
6 a fixed reference point having an absolute coordinate;
- 7 - establishing an optical reference line between the two measuring
8 vehicles;
- 9 - moving the first measuring vehicle in a direction of the second measuring
10 vehicle by a predetermined distance and determining a displacement of
11 the optical reference line perpendicular to a track direction;
- 12 - determining from the displacement of the optical reference line and the
13 predetermined distance an absolute track location; and
- 14 - repeating steps d) and e) until the first measuring vehicle is in close
15 proximity to the second measuring vehicle, thereby surveying the track
16 section between the two end points.

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